

## REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

In the specification, paragraphs have been amended on pages 22 and 24-26.

Claims 1, 4, 39, 46, 52, 53, 62 and 68-71 are currently being amended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-76 are now pending in this application.

### *Drawings*

The drawings were objected to as failing to comply with 37 CFR 1.84(p)(5) for including reference characters not mentioned in the description. The specification has been amended to mention all the reference numerals from Figures 14-16, and thus the objection to the drawings has been overcome. No new matter has been added.

### *Claim objections*

Claims 1, 9, 21, 24, 29, 35, 43, 46, 48, 56, 57, 61 and 68-79 were objected to for informalities. In general, the claims have been amended to address the issues raised in the Office Action. With respect to the “correcting function” in claims 1 and 24, however, applicant submits that this correcting function is broader than the specific correcting function as recited in claims 9 and 29, respectively, and that claims 9 and 29 are more limiting in scope for the correcting function as compared to their respective parent claims, 1 and 24. Claims 9 and 29 merely recite a particular embodiment of the invention (see specification, page 8, lines 1-10).

Moreover, applicants submit that the brackets in claims 9, 21, 29, 35, 43, 48, 56 and 57 are proper. While the use of double brackets in current U.S. practice signifies language

deletion, and thus might cause confusion, the brackets in claims 9, 21, 29, 35, 43, 48, 56 and 57 are single brackets, and thus no confusion should result.

***Rejections under 35 U.S.C. § 101***

Claims 1-23 stand rejected under 35 U.S.C. § 101 as lacking patentable utility. Claims 24-37 stand rejected under 35 U.S.C. § 101 as lacking a real and tangible result. Applicant traverses these rejections for at least the following reasons.

Independent claim 1 recites a method which, among other steps, determines and stores correcting coefficients for a correcting function based on sets of responses. Applicant submits that the determined and stored correcting coefficients have patentable utility in that they may be used for correcting responses of a slave instrument. While claim 1 does not recite correcting the responses of the slave instrument using the correcting coefficients, nevertheless the method of claim 1 has utility in that it determines and stores the coefficients. As an analogy for utility, applicants provide the example of manufacturing and using a hammer. The manufacture of a hammer clearly has utility, even though a claim to the manufacture does not also recite using the hammer to drive a nail. In a similar fashion, independent claim 1 which determines and stores correcting coefficients, need not recite the use of the correcting coefficients to have patentable utility. Claims 2-23 ultimately depend from claim 1 and likewise have utility.

Independent claim 24 does provide a real and tangible result in that it provides a set of corrected responses, where the responses are ultimately determined based on measurements with a slave instrument. Moreover, the Office Action states that “the intention is to use this method in an X-ray inspection system as in claim 1.” Applicant submits, however, that claim 24, while pertaining to a slave instrument that performs measurements, is not limited to X-ray measurements. Applicants submit that the breadth of claim 1 should not be misconstrued as claim 1 lacking a real and tangible result. Claims 25-37 ultimately depend from claim 24 and likewise have utility.

***Allowable subject matter***

Applicant appreciates the indication that claims 39-42, 54, 57-59, 63-64, 66-67 and 71 contain allowable subject matter.

***Rejections under 35 U.S.C. § 103***

Claims 1-2, 4-6, 15-16, 19, 22, 24, 26, 30, 32, 36, 38, 40, 44-47, 49-53, 55, 60-62, 65, and 72-76 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,459,677 to Kowalski (“Kowalski”) in view of U.S. Patent No. 4,866,644 to Shenk (“Shenk”) and U.S. Patent No. 4,168,431 to Henriksen (“Henriksen”). Claims 18 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kowalski, Shenk, and Henriksen, and further in view of U.S. Patent No. 4,893,253 to Lodder (“Lodder”). Applicant respectfully traverses these rejections for at least the following reasons.

Independent claim 1 recites “determining, based on the sets of responses, a correcting function, the correcting function being a functional relationship between a ratio of related responses of the master instrument and a sum of a plurality of terms, each term being a product of a correcting coefficient ( $B_i$ ) and powers of related responses ( $Q_{low}^S$  and  $Q_{high}^S$ ) of the slave instrument, wherein each response is raised to a power being a positive or negative real number, or zero, thereby determining a first set of correcting coefficients ( $B_0; B_1; B_2 \dots$ ).” The references cited in the rejection of the claims fail to suggest at least this feature of claim 1.

The Office Action, on page 8, recognizes that Kowalski fails to disclose this feature, but on page 10, supplies Henriksen for disclosing this feature. Henriksen, however, fails to cure the deficiencies of Kowalski. Henriksen merely discloses calibrating a single instrument using a sample beam and a monitor beam and using different known calibration standards (See FIG. 3, col. 7, lines 16-21, 36-40). Henriksen discloses nothing regarding determining a correction function using responses of a master instrument and a slave instrument, much less a correction function which is a “functional relationship between a ratio of related responses of the master instrument and a sum of a plurality of terms, each term being a product of a correcting coefficient ( $B_i$ ) and powers of related responses ( $Q_{low}^S$  and  $Q_{high}^S$ ) of the slave

instrument, wherein each response is raised to a power being a positive or negative real number, or zero.” Thus, even if Kowalski were modified to calibrate its instrument in the fashion of Henriksen, the resulting calibration would not involve the correction function as recited in claim 1.

The references of Shenk and Lodder were cited for other features of the claims, but also fail to cure the deficiencies of Kowalski.

Independent claim 24 recites “determining a ratio  $[Q_{\text{low}}/Q_{\text{high}}]^{\text{corr}}$  using a correcting function, the correcting function being a functional relationship between a ratio of related responses of a master instrument and a sum of a plurality of terms, each term of the plurality of terms being a product of a correcting coefficient ( $B_i$ ) and powers of related responses ( $Q_{\text{low}}^S$  and  $Q_{\text{high}}^S$ ) of the slave instrument, wherein each response is raised to a power being a positive or negative real number, or zero”, and is thus patentable over the applied references for reasons analogous to claim 1.

Independent claim 52 recites “a processor configured to determine, based on the sets of responses, a correcting function, the correcting function being a functional relationship between a ratio of related responses of the master instrument and a sum of a plurality of terms, each term being a product of a correcting coefficient ( $B_i$ ) and powers of related responses ( $Q_{\text{low}}^S$  and  $Q_{\text{high}}^S$ ) of the slave instrument wherein each response is raised to a power being a positive or negative real number, or zero, thereby determining a first set of correcting coefficients ( $B_0; B_1; B_2 \dots$ )”, and is thus patentable over the applied references for reasons analogous to claim 1.

The dependent claims are patentable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

June 26, 2006

By

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